Water Quality Program Policy

Chapter 1: ***WQP Policy 1-11***

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References:	*Federal Clean Water Act Section 303(d)* *40 CFR 130* *40 CFR 25*	*Revised:*	February 2002

Assessment of Water Quality for the Section 303(d) List

Purpose: The state is required under Section 303(d) of the federal Clean Water Act to periodically assess and prepare a list of waterbodies that do not meet water quality standards. This policy describes a series of categories to be used in the upcoming assessment process, including one for the 303(d) list itself and others that more broadly assess water quality conditions throughout the state. This policy also provides guidance for data submittal, data quality assurance and requirements, and criteria for assignment of specific waterbodies to each category. This updated policy, in combination with the guidance documents referenced herein, constitutes the 'Listing Methodology' for the Section 303(d) list as required by the Environmental Protection Agency.

Application: This policy applies to Ecology staff when conducting assessments for the Section 303(d) list. It applies to stakeholders when submitting data for the assessment process or developing data collection programs for use in future assessments.

Contents:

1. Introduction and Background

The state is required under Section 303(d) of the federal Clean Water Act (CWA) and the Environmental Protection Agency's (EPA) implementing regulations (40 CFR 130.2(j)) to periodically prepare a list of waterbodies that do not meet state water quality standards, National Toxic Rule, or Human Health Criteria. In Washington, this list is prepared by the Department of Ecology (Ecology).

The list was last prepared in 1998. Because EPA was preparing new rules and guidance, no list was required in 2000. The next list is required in 2002.

The state surface water quality standards to be used for the listing are in Chapter 173-201A WAC *Water Quality Standards for Surface Waters of the State of Washington*. Ecology has been working on revisions to the state surface water quality standards. However, the revised standards will not be final by the time the list is developed, so the existing standards will be used. For sediments, the standards will be the Sediment Quality Standards in Chapter 173-204 WAC.

The criteria in this policy have been developed to guide the assignment of waterbodies into one of four categories. Only one category (Category 4, as described below) represents the 303(d) listed waterbodies. The criteria for the 303(d) list were developed to identify only those waterbody segments for which there is good documentation that water quality standards are not being met. These waters, and only these waters, are subject to Total Maximum Daily Loads (TMDLs). As part of the listing process, the waters placed on the 303(d) List will be prioritized and scheduled for doing TMDLs.

TMDL studies are a key tool in the work to clean up impaired waters. In short, TMDLs identify the acceptable amount of pollutant allowed to be released into a waterbody, and allocate that amount among various sources. The technical studies prepared for TMDLs also provide a consolidated view of the condition of the water, and a framework to help develop, focus and evaluate activities to improve water quality. The public interactions in the TMDL process, from scoping through ongoing implementation, can provide a forum for discussing issues, pursuing solutions, and adjusting activity over time to insure progress.

The remaining categories (Categories 1 through 3, including subcategories of Category 3) are intended to inform other water quality efforts in Washington. These new categories include waters that meet the water quality standards but still prompt concerns, and waters that are impaired by pollution but for various reasons do not require development of a TMDL.

The 303(d) list and overall water quality assessment is scheduled to ready for public comment by Fall 2002, with the final list and assessment information sent later to EPA. The entire

assessment – all four categories – will be submitted to EPA and for public review, but only the 303(d) list category is subject to EPA approval. EPA's decision to approve the 303(d) list, including any revisions they may make, is also subject to public review and appeal.

Because the 303(d) list requires federal approval, the federal regulations for public notice requirements (40 CFR Part 25) will be used to solicit information collected by interested and affected parties for revision of the proposed list. The requirements include notification, access to proposed documents, opportunity to provide comments, and serious consideration of and response to those comments by Ecology. In particular, interested parties will be notified to submit appropriate water quality and related data to Ecology during a 60-day "call for data." Additional conferral with tribes and consultation with irrigation districts will occur in compliance with the existing MOAs with them, and also with EPA to ensure consistency with federal requirements.

New federal guidance expands the information that is requested on waterbodies. Accordingly, Ecology will request and submit this additional information whenever possible.

Under this policy, data submitted for consideration needs to include verification of appropriate Quality Assurance/Quality Control (QA/QC). Waterbodies with standards violations because of natural conditions and with documentation of no significant human contribution will not be proposed for listing on the 303(d) listed. Previously 303(d) listed waterbodies will not be listed this time if a new review of the data, including of new data, does not show impairment according to this policy. We will not exercise the federal option to include waters that currently meet standards but are considered likely to be impaired by the next listing effort.

Various data requirements, including documentation, have been revised since 1998. The data used to develop the 303(d) list in 1998 will be used in this year's assessment, but will now be evaluated against the new assessment criteria in this policy.

If new situations or issues arise that are not covered by this policy, Ecology will clearly document to EPA the assessment decisions that are made.

2. Coordination with Tribes

In accordance with the Centennial Accord, this policy supports intergovernmental cooperation between the state and the federally recognized tribes in Washington State in the development of the state's 303(d) list. The policy relies on the 1997 *Cooperative Management of the Clean Water Act 303(d) Program for the Tribes in Washington State, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency Region 10*.

Areas of specific cooperation during the 303(d) listing process that are developed with an interested tribe within Washington State and described in writing in a signed agreement with them will supplement this policy. There are not yet any such agreements in place.

Tribes have independent authority for setting water quality standards and implementing regulations for waters on reservation land under the CWA. Washington State is bound under the Supremacy Clause of the United States Constitution, article VI; c1.2, to carry out the provisions of the United States Treaties and relevant federal court rulings. This policy is not intended to and does not enlarge, diminish, or define the jurisdiction of the state or the tribes. Nor does this policy limit the right of the state or any tribe to act in other forums to protect its rights.

Ecology staff will confer on a government-to-government basis with the staff of each interested tribe with affected natural resources during the following steps in the development of the state's 303(d) list:

- Policy development;
- Data assessment; and
- Preparation of final list and responsiveness summaries.

Cooperation on other 303(d) listing tasks such as gathering data, public involvement, and list submittal to EPA may be negotiated as desired by individual tribes. Disagreements should be handled at the staff level whenever possible. If necessary, dispute resolution should be pursued following the process in the 1997 cooperative management document.

If a tribe is interested in identifying impaired waters on-reservation in coordination with the state, the water quality program staff will cooperate with tribes who enter into an agreement to:

- Use the state's 303(d) process for a joint state and Tribal submittal of 303(d) waters on reservation; or
- Establish a Tribal listing process.

However, a tribe may prefer to work directly with EPA to develop an on-reservation list and need not cooperate with the state. EPA encourages interested tribes to contact EPA as early as possible to discuss 303(d) listing of on-reservation waters.

Ecology’s desire is to, whenever possible, make listing decisions for off-reservation waters by mutual agreement through timely sharing of information, clarification, and discussion. The state and each individual tribe are responsible for making their own final listing recommendations to EPA within its respective delegated 303(d) program, insofar as program funding permits.

At this time, the Chehalis Indian Tribe and Puyallup Indian Tribe have EPA-approved water quality standards under Section 303(c) of the CWA for on-reservation waters. In a separate action, EPA has promulgated federal water quality standards for the Colville Reservation that are in effect under the CWA. EPA has found that the Tulalip Tribe is eligible under Section 518 of the CWA for treatment in the same manner as a state (TAS) to administer the CWA water quality standards program, but the Tulalip Tribe has not yet submitted standards to EPA for approval. The Kalispel Indian Tribe, Makah Indian Tribe, Lummi Nation, Spokane Indian Tribe, and Yakama Nation have applied to EPA for TAS eligibility determinations to administer the water quality standards program. Those applications are under review, with no EPA action yet taken on their Tribal water quality standards.

3. Public Participation

The participation of many and diverse members of the public is essential to completing an accurate and useful assessment of Washington's water quality. Much of the data used for the 303(d) assessments comes from private organizations, not just government agencies. The review of that data, and the judgment of how to categorized waterbodies in accordance with state and federal law and guidance, is best informed by the perspective and wisdom of many people. Ecology encourages everyone in Washington to take a greater interest in our water quality, and to participate in this effort.

Individuals and organizations can participate in the assessment of Washington's waters, 303(d) listing, and TMDL process in any of the following ways:

- Review and comment on the listing policy and methodology (this document)
- Submit water quality data for assessment
- Review and comment on Ecology's proposed 303(d) list and other assessment categories
- Review and comment on EPA approval or disapproval of Ecology's proposed 303(d) list
- Review and comment on the proposed TMDL priority list
- Participate in preparing and/or review and comment on subsequent TMDLs
- Participate in other water quality efforts, guided by the overall water quality assessment provided by all the categories in this assessment

Anyone with questions about this process should contact the Ecology staff listed above at:

- Department of Ecology, PO Box 47600, Olympia, WA 98504-7600
- (360)407-6000
- 303d@ecy.wa.gov

4. Categories

All waterbodies for which Ecology receives sufficient data will be assigned to one of the categories described below. Only one category – Category 4 – constitutes the 303(d) list of impaired waters. All the categories together represent the statewide assessment of Washington's water quality and will be submitted to EPA and the public, but only the 303(d) list is subject to EPA approval.

Each waterbody will be placed in the category showing the greatest degree of concern, impairment, or requirement for compliance actions (i.e. the highest numbered category). For example, if a waterbody is found to be in compliance with the water quality standards for one pollutant, but is impaired for another, it will be categorized based on the impairment.

If there is no data or insufficient data to assign a waterbody to any category, it will not be categorized until adequate data is obtained. Ecology plans to prepare summary data on this group of waterbodies, such as their number and general location, but not individual descriptions of them. Ecology encourages future monitoring of these waters to determine if water quality

standards are attained. (Note that data that is insufficient for listing as impaired, but does still raise some concerns, may qualify a waterbody for Category 2.)

"Waterbodies," in this context, includes rivers, streams, lakes, Puget Sound, the Straits of Juan de Fuca, and coastal waters. For categorizing purposes, all waterbodies are divided into segments, as described in Part 8 on *Waterbody Segments*.

Category 1. Meets Tested Standards

Where available data shows attainment of all water quality standards for which a waterbody has been tested or studied, the waterbody will be placed in the *Meets Tested Standards* category. This does not necessarily mean that all standards supporting all beneficial uses have been tested for or studied in each waterbody.

To be included in this category, data must be available which shows attainment of at least one water quality standard, and which shows no known failure to meet any water quality standard. In addition, there must no water quality concerns apparent for the waterbody.

This category represents the waters in Washington that best meet the applicable beneficial uses, according to the available data. All interested parties are encouraged to conduct future monitoring of these waters to determine if tested water quality standards continue to be attained or if untested water quality standards are attained.

Category 2. Waters of Concern

Sometimes data that is not sufficient for listing a waterbody as impaired may still raise a concern about water quality. Examples of this include:

- The data shows some exceedances of an applicable water quality standard, but the data does not include enough samples or enough exceedances as required for listing as impaired;
- The data shows impairment, but there is substantial contradictory data;
- The data shows impairment, but there are quality assurance problems with the data; or
- Narrative information raises concerns, but is not sufficient for listing as impaired.

In these and similar cases, the waterbody will be placed in the *Waters of Concern* category. Some specific situations when waterbodies should be included in this category are described in Part 9 *Assessment Criteria*. Situations not specifically described will be assessed by Ecology on a case-by-case basis.

This category is intended to help Ecology, the public, and other stakeholders be aware of, track, and investigate these water quality concerns. No TMDL or other pollution controls actions are mandated for waterbodies in this category. For these waters, Ecology and others should pursue as many opportunities as possible to conduct additional monitoring and sampling, incorporate the waterbody into existing studies, or find other means to confirm or disprove the suspected problem.

This category is not designed for cases with a mere lack of evidence. Instead, it is for when the data create significant concerns of possible impairment to beneficial uses, but fall short of demonstrating impairment. Waterbodies for which there is merely insufficient data to determine whether a water quality standard is attained, but with no apparent cause for concern, will not be categorized until adequate data is obtained.

Category 3. Impaired But Does Not Require a TMDL

This category has three subcategories.

a. Has a TMDL

When data shows that a waterbody is impaired by a quantifiable pollutant, but a TMDL addressing that impairment has already been developed and approved by EPA and is successfully being implemented, the waterbody will be placed in the *Has a TMDL* category. This category is not part of the 303(d) list. However, if the TMDL is determined to be unsuccessful, the waterbody will be moved back to the 303(d) list.

When a TMDL is approved, the assumption will be that the analysis and implementation measures included in it will be successful in bringing about improvements to water quality as needed to reach compliance within the time period scheduled in the TMDL. To make a determination that a TMDL is unsuccessful will require convincing evidence to the contrary.

Considerations that may lead to such a determination include:
- Required monitoring and other implementation actions as described in the Detailed Implementation Plan are not being conducted or not being conducted in a timely way according to the plan, or efforts to carry out the actions are minimal or not evident;
- Targeted water quality standards have not been achieved by the time projected by the TMDL;
- A major event has dramatically changed the local conditions on which the TMDL was based, making it no longer applicable; or
- New information recognized in the appropriate professional fields and applicable to the specific TMDL and conditions is not being used during required reviews.

A TMDL will be considered successful so long as an adaptive management process is being fully used to respond to new information or changed conditions and to ensure that progress on water quality improvement is being made.

Ecology will make the determination of whether an existing TMDL is unsuccessful on a case-by-case basis. The rationale for moving the waterbody back onto the 303(d) list will need to be explained and documented.

b. Has a Pollution Control Plan

When data shows that a waterbody is impaired by a quantifiable pollutant, but a pollution control plan has been approved by a local, state, or federal authority, and that plan is stringent enough to attain the water quality standard or standards related to the impairment in a reasonable timeframe, the waterbody will be placed in the *Has a Pollution Control Plan* category. This category is not part of the 303(d) list. A TMDL is not required because the pollution control plan is designed to improve and attain water quality in a manner comparable to a TMDL.

The mere existence of pollution controls, such as permit requirements or water quality regulations, is not sufficient to qualify a waterbody for this category. To be considered for the *Has a Pollution Control Plan* category, the pollution control plan must meet all of the following criteria:

- Be problem-specific and site-specific;
- Have reasonable time limits established for correcting the specific problem;
- Have a monitoring component;
- Have adaptive management built into the plan to allow for course corrections if necessary; and
- Be feasible (offer assurances that implementation will occur).

The plan must specifically indicate how the controls and other planned actions will be implemented to achieve attainment of water quality standards by a given date, and the actions must be implemented accordingly. Improvement must be assured by enforceable legal or financial guarantees that the planned actions will be performed. Monitoring must be scheduled to verify that the water quality standard is attained as expected. Modeling may be required to show that attainment of the water quality standard is likely.

Examples that may qualify for this category include:

- CERCLA, MTCA, or RCRA sites with signed Records of Decision
- Clean Lakes Restoration Process Phase II areas
- Habitat Conservation Plans with specific plans to address water quality

The waterbodies in this category will be reviewed and assessed during each listing cycle. If Ecology determines that the pollution control plan, the actions related to it, or the assurances that they will be carried out are inadequate or unsuccessful, the waterbody will be moved to the 303(d) list. The rationale for this listing will need to be explained and documented.

c. Impaired by a Non-Pollutant

Some beneficial uses of a waterbody may be impaired due to habitat alterations, water flow alterations, or similar reasons the cause of which cannot be precisely measured. When data shows that a waterbody is impaired for such reasons, it will be placed in the *Impaired by a Non-Pollutant* category. This is not part of the 303(d) list.

(The EPA defines these causes of impairment as "non-pollutants," as opposed to quantifiable "pollutants" such as toxics, nutrients, and temperature. However, both pollutants and non-pollutants cause "pollution" if they impair beneficial uses of the water.)

Because such impairments do not result from a quantifiable pollutant for which the inputs can be allocated among sources, the TMDL process is not appropriate. No TMDL is required for these waters, and there are no other federal requirements related to the 303(d) process for taking actions or establishing formal schedules for reaching compliance.

Whenever possible, these waters will be tracked and efforts will be made during the applicable watershed cycle to identify and support water quality management actions or programs that could bring about compliance with water quality standards. This might include basin plans, road management plans and improvements, or habitat restoration projects. Waterbodies in this category that have known programs or activities in place that are likely to lead to compliance over time will be noted.

If the source of impairment is unidentified, but is suspected to be a non-pollutant, the waterbody will be placed in this category.

Some of the waterbodies in this category were previously included in the 303(d) list. According to new EPA guidance, impairments from non-pollutants are no longer to be submitted as part of that list.

Category 4. 303(d) List.

Waterbodies for which at least one water quality standard is not attained due to impairment by one or more pollutants, and which do not already have a TMDL or other sufficient pollution controls in place to address that standard, will be placed in this category. This category will be submitted to EPA as the 303(d) list. A TMDL is required for each water body on this list, to guide efforts to bring it back into attainment. (The basis for prioritizing and scheduling TMDL studies is found in Part 12 *Prioritizing TMDLs*.)

If the source of impairment is unidentified, but is suspected to be a pollutant (as opposed to the non-pollutants described under *Impaired by a Non-Pollutant* above), the waterbody will be placed in this category.

5. Waterbody Segments

The waterbody segmentation system to be used for this assessment will be the same one used for the final 303(d) list in 1998. In this system, segments of rivers, streams, and lakes of less than 1,500 acres are defined as the portion of the waterbody lying within a given section of a township and range. In open waters – including marine waters, lakes of more than 1,500 acres, and the lower end of large rivers – segments are defined by a rectangular grid sized at 4.5 seconds longitude by 4.5 seconds latitude (approximately 2,460 feet by 3,650 feet). Ecology maintains a GIS layer of this grid.

Upon receiving data, Ecology will locate the sample station based on the coordinates given with the data and will determine which segment the station is in. This segmentation system will apply to both water column and sediment data.

Extended Segments

When sample data shows at least one exceedance of an applicable water quality standard in a segment, but there is not a sufficient number of samples or not a sufficient number of exceedances in that segment to place it on the 303(d) list, then the data may be combined with data from one or more adjoining segments which also shows at least one exceedance of the same standard. Explanation must be provided as to why the exceedances in different segments appear to be related. The pooled data will then be assessed together as an extended segment.

Any number of adjoining segments can be combined as an extended segment so long as each individual segment includes at least one exceedance of the same standard. An extended segment can include a segment that contains a sufficient number of samples and exceedances to be categorized independently.

An extended segment should normally include segments that adjoin on a side, but can include segments that touch only on a corner if the sampling pattern and/or river geography are such that they only minimally cross the neighboring segments that also touch on that corner. On rivers and streams, the adjoining segment must be immediately upstream or downstream (except for minimally crossing a corner).

6. How to Submit Data

Submittal of data in electronic format is much preferred. The most preferred format would be if the data is compatible with Ecology's Environmental Information Management database. Otherwise, a flat file, such as a spreadsheet, is preferred over a relational database. Information in paper hard copy will also be accepted.

[to be added:
- ***how exactly to submit, who to submit it to, where to send it, etc***
- ***the website address for more information***
- ***any other helpful hints on submitting data]***

Sediments Data

For contaminated sediments, only data that is already entered into the SEDQUAL database will be assessed. New data received will not be used for the 2002 assessment process.

Sediment data can still be submitted for assessment in future 303(d) listings. See www.ecy.wa.gov/programs/tcp/smu/sediment.html for information on the SEDQUAL data and submission requirements.

7. Data Quality Assurance

Quality assurance requirements must be met by all data used for this assessment.

Sampling and analysis must be conducted under a documented quality assurance project plan. Guidance for preparing quality assurance project plans is available from several sources. (See Department of Ecology: Guidelines for Preparing Quality Assurance Plans for Environmental Studies, publication #01-03-003; Guidelines and Specifications for Preparing Quality Assurance Project Plans, publication #91-16; Sediment Sampling and Analysis Plan Appendix: Guidance on the Development of Sediment Sampling and Analysis Plans Meeting the Requirements of the Sediment Management Standards, December 1995 Draft; Department of Natural Resources: TFW-AM9-99-005, DNR publication 107; and EPA: EPA 841-B-96-003.)

Documentation must be provided indicating that the objectives of the quality assurance project plan were met. A form for this is available at ***[website address to be added]***.

This same documentation will be required for previously submitted data. Ecology will provide the form to previous submitters for this purpose.

Parties submitting information collected by others must use the documentation form to indicate that the required quality assurance objectives were met by the party that did the collecting.

8. Data Requirements

General Requirements

Minimum information

The minimum information required in submitted data includes: the location of each sample station; the date the sample was taken; the parameter measured; the measured value; and the unit of measurement.

It would be most helpful if submittals include additional information, including documentation of associated field conditions such as existing beneficial uses, adjacent land uses, and suspected and likely sources of water quality problems. This information may be used in assessing the data and can aid in scoping subsequent TMDLs or follow-up monitoring. New federal guidance also requests this information.

Sample location

Data submittals must include sufficient information on the location of the sample station to allow for accurate mapping. Both township, range, and section as well as longitude and latitude are desirable. For rivers, streams, and lakes under 1,500 acres, the township, range, and section is

preferred. For marine waters, lakes over 1,500 acres, and the lower end of large rivers, the longitude and latitude of each sample station with the reporting format used, such as NAD27, is preferred. If neither is available, the data submittal must include a map or clear description of the location of the sample station. For contaminated sediments, the SEDQUAL database requires longitude and latitude in NAD27 format.

Data Age

If data is available that was collected in or after May 1992 and that meets the other requirements of this policy, then data collected before May 1992 for that segment and parameter will not be used in the assessment. If no such newer data is available, then data collected before May 1992 and previously submitted and used to place waters on the 303(d) list will continue to be used, if that data meets all current requirements. Data collected before May 1992, but not submitted until this assessment cycle, will not be used unless specific information or rationale is provided that show that the data represent current conditions.

Sample representation

Sampling should be conducted to represent the waterbody segment as a whole – spatially and over time – rather than limited or isolated conditions. Ideally, sampling would be done across a range of seasons or other appropriate conditions. Documentation that explains how the sample is representative both spatially and over time is optional, but highly preferred.

Targeted sampling during a specific season may be appropriate for a seasonal use such as anadromous fish spawning. Timing of sample collection should include the critical season for the parameter and applicable designated use. Information on the significance of the sample timing in relation to the designated uses would be helpful.

Sampling

Laboratory samples should be analyzed at a state-accredited laboratory (per WAC 173-050 and Ecology Executive Policy 1-22; the list of laboratories can be found at www.ecy.wa.gov/programs/eap/labs/labs_main.html). Use of the Winkler titration method for dissolved oxygen measurement is acceptable from a laboratory that is not accredited by the state, if the detectable difference is less than or equal to 0.2 mg/l. (See Standard Methods for the Examination of Water and Wastewater for method details.)

All metals should be sampled using clean sampling and analytical techniques, or appropriate alternate sampling procedures or techniques. (For guidance, see EPA (1996) *Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*.)

Testing should be by an approved method with a quantitation limit that yields reliable analytical results at concentrations that are less than the criterion. Analytical results below the method detection limit will not be evaluated. (For guidance on quantitation limits refer to Tables VI-2 and VI-3 as updated in the Ecology Permit Writer's Manual, ECY Publication # 92-109 and the Sediment Sampling and Analysis Plan Appendix for sediment analyses.)

When the criterion is between the quantitation limit and the detection limit, and data between the quantitation and detection limits is used, the three highest data values must be averaged prior to evaluation and represent one data point.

Field instruments that were used should not require chemical tests for operation beyond those needed to calibrate them unless appropriate QA/QC information and documentation is provided. Field instruments, such as hydrolabs, should be operated and calibrated according to the manufacturer's recommendations, or other acceptable, demonstrated method. Calibration information and any other appropriate documentation of accuracy should be submitted along with the data.

Measurements of instantaneous concentrations will be assumed to represent the averaging periods specified in the state surface water quality standards for acute and chronic criteria.

Specific Requirements

In addition to the general requirements above, the following specific requirements apply to data on the following topics.

Sediments

A minimum of three samples (either three chemical or three biological) is required to place a waterbody on the 303(d) list due to toxic pollutants in sediments. Sediment samples must be from three different stations in the segment. The samples must be taken from surface sediments 0-15 centimeters in depth (the biologically active zone).

The assessment of sediments will be based on data from the most recent sediment survey available. If the most recent sampling survey provides fewer than three samples within a segment, then data from the next most recent sampling surveys as needed will be used to provide the minimum of three samples. Contaminated sediment samples will be considered the same age for assessment purposes if they were collected and analyzed in the course of the same survey.

The method detection limit for the sample must be less than the Sediment Quality Standards (SQS). The target is to have the practical quantitation limit less than or equal to SQS (see WAC 173-340-200 Definitions). However, where the detection limit is over the SQS, and a pollutant is detected in a sample, the sample will be considered an exceedance.

Data submitted for toxic pollutants must be for the specific isomer or chemical fraction that the criteria relate to.

Marine biological sediment tests must conform with WAC 173-204-315.

Toxics

The water samples from the most recent three-year period with at least three samples in a segment will be used for the assessment of toxic pollutants in the water column. (For toxic pollutants in sediments, see the discussion of *Sediments* above.)

To support placement on the 303(d) list, fin fish muscle tissue samples and whole shellfish tissue samples must have at least three single-fish samples or a single composite sample made up of at least five separate fish.

Data submitted for toxic pollutants in the water column must be for the specific isomer or chemical fraction that the criteria relate to. No data below the detection limit will be used in the assessment.

Fecal Coliform

Sample data for fecal coliform may be reported in 12-month reporting periods or, preferably, in reporting periods that represent distinct climatic regimes, such as seasons, that are relevant to fecal coliform and to the waterbody. If done by distinct climatic regimes, the data can be collected over several years, during the same reporting period each year, with no gaps in the data of greater than two years. Whenever possible, data that is collected year-round will be assessed by distinct climatic regime.

A minimum of five samples is required to support placement on the 303(d) list, collected either over a 12-month reporting period or during the distinct climatic regime, as appropriate. However, the data collection must not be grouped nor spread out over time so as to mask periods of noncompliance. For example, if there is evidence of problems with fecal coliform during a given season, the data collection should not be limited to or primarily conducted during other seasons.

Other Pollutants

"Other pollutants" includes quantifiable pollutants other than toxics and fecal coliform, such as temperature, dissolved oxygen, pH, nitrogen, phosphorus, and suspended solids.

Samples of these pollutants must be taken on separate days. For continuous monitoring data, the daily maximum (or, for dissolved oxygen, the daily minimum) will be considered one sample.

9. Assessment Criteria

Sediments

For chemical effects in marine sediments, the three stations within the segment with the highest concentration of a given chemical will be averaged. A segment will be placed on the 303(d) list for pollutants in the sediment when the average chemical concentration of those three stations

exceeds the applicable chemical Sediment Quality Standard (SQS) described below. A segment will be placed in the *Waters of Concern* category when the average concentration does not exceed the standard, but the concentration at one or two stations does. Chemistry failures can be overridden by biological test results.

For biological effects in marine, freshwater, and low salinity sediments, a segment will be placed on the 303(d) list for pollutants in the sediment when the biological effects at a minimum of three stations exceed the applicable biological SQS described below. A segment will be placed in the *Waters of Concern* category if the biological effects at only one or two stations exceed the standard. Biological test failures cannot be overridden by chemical analyses.

In the following locations, the applicable SQS will be the chemical or biological effects criteria in WAC 173-204-420 and WAC 173-204-520 (at this time the standards in these WACs are the same):

- Recognized sediment impact zones (at the mouth of permitted discharges)
- Recognized sediment recovery zones (historic contaminated sites undergoing natural recovery)
- Cleanup sites under MTCA (SMS), CERCLA, and/or RCRA

In all locations except those listed above, the applicable SQS will be the chemical or biological effects criteria in WAC 173-204-320.

There are no numeric water quality standards for chemical effects in freshwater sediments or low salinity sediments. Assessment with regard to sediments in freshwater will be based on biological tests in accordance with adopted narrative standards, and will be done on a case-by-case, site-specific basis. (See WAC 173-204-340 and *Creation and Analysis of Freshwater Sediment Quality Values in Washington State*, Ecology Pub. No. 97-323a, July 1997.)

Toxics

A segment will be placed on the 303(d) list due to toxic pollutants in the water column when, out of the minimum of three samples within a three-year period, two or more samples exceed the numeric state water quality criteria (WAC 173-201A-040) or the national toxic rule criteria (40 CFR Part 131) for human health. A segment will be placed in the *Waters of Concern* category if any one sample exceeds the criteria

A segment will be place on the 303(d) list due to toxic pollutants in whole shellfish or fin fish muscle when one of the three single-fish samples or one composite sample made up of at least five fish, exceeds the criteria for human health impacts based on EPA's bio-concentration factors and water column criteria established under the national toxic rule (40 CFR Part 131). A segment will be placed in the *Waters of Concern* category if the tissue sampling requirements are not met but any one tissue sample exceeds the criteria.

Where a study area of tissue samples spans multiple river segments and the catch sites are identified, each segment contained a catch site will be placed in the appropriate category. Where

no specific catch sites are identified, the lowest downstream segment only will be placed in the appropriate category.

In addition to the above criteria, a segment will be placed on the 303(d) list if bioassay tests show adverse effects as measured by a statistically significant response relative to a reference or control (WAC 173-201A-040(2)). These tests will be evaluated by Ecology staff and documented on a case-specific basis consistent with WAC 173-201A-040.

Fecal Coliform

A segment will be placed on the 303(d) list for fecal coliform when at least five samples are available within the appropriate reporting period and the data show either of the following:

- The geometric mean value of organism levels in the samples exceeds the applicable geometric mean water quality standard; or
- More than 10% of the individual samples, with a minimum of two, obtained for calculating the geometric mean value exceed the applicable individual sample standard.

When possible, data will be assessed by distinct climatic regimes, such as seasons, that are relevant to fecal coliform and to the waterbody. Segments will be placed on the 303(d) list when the criteria above are met during any such period.

A segment will be placed in the *Waters of Concern* category when the data does not meet the criteria above, but at least one individual sample exceeds the applicable individual sample standard.

In addition, regarding bacteria-related advisories from other government agencies, see the section on *Other Agency Advisories* below.

Other Pollutants

For quantifiable pollutants other than toxics and fecal coliform, a segment will be placed on the 303(d) list if the data show a true exceedance percentage of greater than 10%, using a binomial distribution method with a 90% confidence interval. Using this statistical procedure, a margin of exceedances above 10%, based on a standard deviation, is required to declare with a given degree of confidence, as defined by the confidence interval, that a set of randomly collected samples accurately show that the water in the segment as a whole has greater than 10% exceedances.

The precise margin of exceedances required to achieve this degree of confidence depends on the total number of samples. The number of exceedances required when using this method for sample sizes of up to 100 samples are given in Table 1. With small sample sizes, a minimum of three exceedances will be required.

Table 1. Minimum Number Of Exceedances Required To Place A Waterbody On The 303(D) List, Using A Binomial Distribution With A 90% Confidence Level, For Up To 100 Samples

Sample Size	Number of Exceedances
1-2	NA
3-11	3
12-18	4
19-25	5
26-32	6
33-40	7
41-47	8
48-55	9
56-63	10
64-71	11
72-79	12
80-88	13
89-96	14
97-100	15

A segment will be place in the *Waters of Concern* category if the number of exceedances is below the minimum to place it on the 303(d) list, but is greater than 5% of the samples.

Narrative Standards

A segment will be placed on the 303(d) list on the basis of violating narrative standards relating to pollutants when the information regarding that waterbody segment includes all of the following:

- Documentation of environmental alteration related to deleterious chemical or physical alterations such as nutrients or sediment deposition, as measured by indices of resource condition or resource characteristic or other appropriate measure. Deleterious changes in physical fish habitat is not required. The alteration must be measured and documented using a generally accepted method based on site specific information, with literature thresholds appropriate to the situation or with reference sites;
- Documentation of impairment of an existing or designated use related to the alterations on the same waterbody segment; and
- Identification of a direct human contribution to the environmental alteration.

Decisions based on fish stock status under the narrative standards will be based on the most recently published information from and discussions with federal, Tribal, and state fish management agencies. Any new data submitted for these decisions will be assessed by Ecology staff in consultation with federal, Tribal, and state fish management agencies. Where agreement cannot be reached, the final recommendation on the support of designated uses, for purposes of this assessment, will be made and documented by Ecology.

Narrative standards regarding non-pollutant sources of impairment, such as physical habitat alterations, are discussed under *Non-Pollutants* below.

Non-Pollutants

A segment will be placed in the *Impaired by a Non-Pollutant* category when a beneficial use of the waterbody segment is impaired by a cause other than a quantifiable pollutant (and the waterbody is not placed on the 303(d) list for any other reason). These causes include, but are not limited to:

- Physical habitat alterations, including loss of spawning gravels by scouring or silting over, reduced pool/riffle ratios, loss of large woody debris, loss of habitat due to nuisance species, or loss of access due to culverts or low flows;
- Impaired biologic communities, as determined through bioassay results, macro-invertebrate surveys, or other biological indicators, when the impairment is not linked or suspected to be linked to quantifiable pollutants, or
- Flow alterations, including low flows and changed hydrograph measurements reflecting flashier systems.

Placement of a segment in the *Impaired by a Non-Pollutant* category due to flow alterations requires that the information regarding that waterbody segment include all of the following:

- In-stream flow measurements, including but not limited to hydrographs (synthesized hydrographs must be based on actual flow measurements from the specific stream);
- Documentation of how fish habitat in the specific stream is related to changed flow (e.g., scour from increased peak flows, In-stream Flow Incremental Methodology, Toe-Width, minimum flows set in rule or as conditioned by water rights, or other methods that may be appropriate in cases such as falling water or wide delta areas);
- Documented impairment of fish use on the same waterbody segment, as shown by SASSI, WDFW, or Tribal data, NWPPC Sub-basin plans, Ecology Basin Assessments, or other appropriate assessments; and
- Identified human contribution to the changed flows, such as documentation of diversions upstream of the waterbody segment or of changed storm runoff patterns related to land-use or cover changes.

Assessments regarding inadequate or changed water flows will be based only on considering the needs of in-stream designated uses, not on out-of-stream uses or needs.

Agency Advisories

Segments covered in whole or in part by a swimming, fish, or shellfish advisory issued by the state Department of Health (DOH) or by local health departments, or by similar advisories from other appropriate agencies, will be categorized as described below. The advisory must be based on fish, shellfish, sediment, or water column data specific to the waterbody segment. This will not include shellfish advisories for bacteria due to proximity to wastewater treatment discharges if there is no supporting local data or advisories for marine biotoxins. This will include

advisories for short term conditions, such as storm events, if they apply to 30 or more days in a year.

If the risk assessment parameters or other assumptions used by the agency issuing the advisory are cumulatively less or no more protective than those incorporated into the state standards or the national human health-based water quality criteria (e.g., toxics or pathogens), then the segment will be placed on the 303(d) list. If the parameters or assumptions used in issuing the advisory were based on more protective standards, then the segment will be placed in the *Waters of Concern* category.

Closure of a shellfish bed by DOH, based on its Shellfish Policy, due to fecal coliform will be sufficient to place all segments overlapping the closed shellfish bed on the 303(d) list.

10. Other Assessment Considerations

Natural Conditions

Waterbodies will not be placed on the 303(d) list when natural conditions are determined to be the cause of exceeding applicable standards. However, waterbodies will be placed there when human activities cause impacts in addition to natural conditions that are in excess of the allowable limits on such impacts, as provided in the standards. (See Chapter 173-201A WAC for the significance of natural conditions in Washington's water quality standards, including the level of human contribution allowed beyond certain natural conditions.)

Documentation and justification should address the natural condition or process that relate to the phenomenon. A discussion should explain how or why potential human sources can be ruled out as contributing to the impairment of uses. Documentation should also include modeling results and related studies. The assessment may include well-reasoned best professional judgment. Where sufficient questions remain on natural conditions after assessment to preclude placement on the 303(d) list, a segment may be placed in the *Waters of Concern* category.

Short-Term Impacts

For impairments related to transient and recurring short-term conditions, such as storm events, a segment can be placed on the 303(d) list if those conditions occur on 30 or more days in a year. For impairments related to longer lasting but still temporary conditions, such as large oil spills, a segment can be placed on the 303(d) list if the impairment is expected to exist until the next assessment cycle.

Other Situations

Ecology reserves the right to make assessment decisions on matters not addressed by this policy or in a manner not in complete accordance with the details of this policy as needed to address unforeseen situations. The ultimate judgment in assessment decisions will be based on whether

beneficial uses in a waterbody segment are supported or impaired, as determined in accordance with the water quality standards and other relevant state and federal laws and regulations.

Use of Previously Submitted Data

Data that was submitted for use in previous assessments will not be used as the basis for placing a waterbody on the 303(d) list in any of the following situations:

- The data were collected before May 1992, and data collected in or after May 1992 that meets the other data requirements of this policy are available;
- The data requirements, water quality standards, or assessment criteria have changed, and the data do not meet the new requirements, standards, or criteria;
- More sophisticated analysis using calibrated models of the data shows that water quality standards are met; or
- Flaws in the data are identified that show water quality standards were in fact met. If the identified flaws are in the assessment based on that data, not in the data itself, the data will continue to be used, but will be assessed anew.

Otherwise, previously submitted data will be pooled with any newly submitted data that meets the requirements of this policy, and the assessment will be based on all of the data together.

11. Prioritizing TMDLs

The waterbodies placed on the 303(d) list will be prioritized for TMDLs based on these primary criteria:

- Vulnerability of waterbodies to degradation
- Risks to public health, including drinking water
- Risk to aquatic life and other water-dependent wildlife, especially threatened and endangered species

Secondary criteria that may be considered where applicable are:

- Other designated uses
- Timing of grant and loan projects
- Discharge permit issuance and renewal
- FERC hydroelectric project re-licensing schedules
- Existing water quality management plans
- Public interest and support
- Priorities from other planning processes, including section 319
- Ecology's short-term programmatic needs and resources
- Technical feasibility
- Judicial orders and decisions
- National policies and priorities
- Likelihood of success
- Opportunities for pollution prevention

Where an impaired waterbody is covered by new, approved water quality standards or other regulations that set new permit or land use requirements (such as new forest practices rules), and these new requirements are designed and reasonably expected to correct the impairment, but there has not been sufficient time for the impact of those standards or regulations to be reflected in the waterbody, then that waterbody will be assigned a significantly lower priority for preparing a TMDL.

The 1998 MOU on TMDLs

EPA and Ecology signed a Memorandum of Understanding (MOU) in 1998 regarding TMDLs. Under this MOU, waterbody segments on the 303(d) list in 1996 that are still on subsequent 303(d) lists must have TMDL studies completed by 2014. The MOU provides a watershed-based process to schedule TMDLs. This scheduling is prioritized using the primary and secondary criteria listed above.

The process for prioritizing TMDLs under the MOU begins with annual TMDL scoping meetings in each Ecology region. Ecology assembles a cross program team of staff to review the 303(d) listed waters and watershed conditions in designated Water Quality Management Areas (WQMAs) around the state. Four WQMAs, one in each region, are started through the process each year, on a five-year rotation. The Ecology team then identifies a draft TMDL priority list for 303(d) listed waterbodies in each of the four WQMAs.

These draft priority TMDL lists then enter a public process to be validated or revised. Following public input, the list of TMDLs and other studies is reviewed by Ecology's Environmental Assessment Program (EAP). EAP assesses the cost of each project and determines their capability to produce the work beginning in the next state fiscal year. Ecology management prioritizes the projects to fit within the current resources available. The result of this process is a draft Project List that contains the Statewide TMDL Priority List for the following fiscal year.

The Statewide TMDL Priority List is then mailed to stakeholders and interested individuals statewide for comment. Announcements are made through the media. The comment period lasts 35-40 days. Public comments are received and responded to via a Responsiveness Summary. After weighing public comments, a final Statewide TMDL Priority List is produced and promulgated to the public via an Ecology Focus Sheet.

Consistent with intergovernmental cooperation with tribes, Ecology’s preparation for scoping will include conferral with interested tribes on their priority water quality issues.

Between the 2002 assessment process and the MOU date of 2014, Ecology will complete two full rotations through the five-year watershed cycle. This will provide two periods for scoping and re-prioritizing TMDL schedules in each WQMA in response to new information and opportunities. Some TMDLs may be done out-of-cycle based on a threat to public health, such as drinking water, or to address ESA issues, or to take advantage of unique opportunities to coordinate with other efforts (such as watershed planning processes or private initiatives). Out-of-cycle TMDLs may also be done by Ecology to better distribute work.

While Ecology's MOU obligations are tied to the 1996 list of impaired waters, later listings will be incorporated into the same general schedule described here, in order to address waters posing high risk according to the criteria listed above and to gain efficiency in project management.

Abbreviations

CERCLA – Comprehensive Environmental Response Compensation and Liability Act (also known as Superfund)
CFR – Code of Federal Regulations
CWA – Clean Water Act
EPA – U.S. Environmental Protection Agency
ESA – Endangered Species Act
FERC – Federal Energy and Regulatory Commission
MTCA – Model Toxic Control Act
NWPPC – Northwest Power Planning Council
QA/QC – Quality Assurance/Quality Control
RCRA – Resource Conservation and Recovery Act
TMDL – Total Maximum Daily Load
WAC – Washington Administrative Code
WQP – Water Quality Program

Approved: _____

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